Complete Summary

GUIDELINE TITLE

Lipids/fats in pre-dialysis patients.

BIBLIOGRAPHIC SOURCE(S)

Voss D. Lipids/fats in pre-dialysis patients. Nephrology 2005 Dec;10(S5):S184-5.

Voss D. Lipids/fats in pre-dialysis patients. Westmead NSW (Australia): CARI - Caring for Australasians with Renal Impairment; 2005 Aug. 4 p. [3 references]

GUIDELINE STATUS

This is the current release of the guideline.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Chronic kidney disease

GUIDELINE CATEGORY

Evaluation
Management
Treatment

CLINICAL SPECIALTY

Family Practice
Nephrology

Nutrition
Pediatrics

INTENDED USERS

Dietitians
Physicians

GUIDELINE OBJECTIVE(S)

To assess whether there are any differences in mortality or morbidity associated with varying dietary intake of lipids, saturated and unsaturated fats

TARGET POPULATION

Adults and children with chronic kidney disease

INTERVENTIONS AND PRACTICES CONSIDERED

Evaluation*

1. Serum cholesterol and triglyceride levels
    - Blood cholesterol targets

Management/Treatment*

1. Cholesterol-lowering medication therapy (statins)
2. Dietary modification
3. Lifestyle risk factor modification
4. Fibrate therapy
    - Monitoring of renal function

*Considered but not recommended

MAJOR OUTCOMES CONSIDERED

- Serum cholesterol and triglyceride levels
- Renal function
- Morbidity
- Mortality

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Databases searched: MeSH terms and text words for kidney disease were combined with MeSH terms and text words for dietary fats then combined with the Cochrane highly sensitive search strategy for randomised controlled trials and search filters for identifying prognosis and aetiology studies. The search was carried out in Medline (1996 – November Week 2, 2003). The Cochrane Renal Group Trials Register was also searched for trials not indexed in Medline.

Date of searches: 27 November 2003.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Levels of Evidence

Level I: Evidence obtained from a systematic review of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from at least one properly designed RCT

Level III: Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method); comparative studies with concurrent controls and allocation not randomized, cohort studies, case-control studies, interrupted time series with a control group; comparative studies with historical control, two or more single arm studies, interrupted time series without a parallel control group

Level IV: Evidence obtained from case series, either post-test or pretest/post-test

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review with Evidence Tables

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Recommendations of Others. Recommendations regarding lipids/fats in pre-dialysis patients from the following groups were discussed: Kidney Disease Outcomes Quality Initiative, British Renal Association, Canadian Society of Nephrology, and European Dialysis & Transplant Nurses Association/ European Renal Care Association.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the levels of evidence (I–IV) can be found at the end of the "Major Recommendations" field.

Guidelines

No recommendations possible based on Level I or II evidence

Suggestions for Clinical Care

(Suggestions are based on Level III and IV evidence)

- All persons with chronic kidney disease (CKD) (pre-dialysis) should have regular checks of their serum cholesterol and triglycerides, and the blood cholesterol target should be similar to guidelines for the non-renal disease population. (Opinion)
- Cholesterol-lowering medication therapy should be commenced in patients with CKD (pre-dialysis) who have failed to attain a serum cholesterol below 4.5 mmol/L with dietary manipulation. The 3-hydroxy-3-methylglutaryl coenzyme A (HMG CoA) reductase inhibitors (statins) are the choice for low

high density lipoprotein (HDL) and/or elevated low density lipoprotein (LDL). (Opinion)

The implementation of local guidelines (when available) for the vascular health of the non-renal failure population is recommended for the pre-dialysis renal patient. Care must be taken with the choice of therapies for reducing blood lipid levels.

In non-diabetic CKD patients, the hypertriglyceridaemia can be reduced by both increasing the dietary polyunsaturated: saturated fat ratio and by reducing the carbohydrate content of the diet. Dietary modification under the supervision of a suitably qualified dietician may be helpful for managing the hypertriglyceridaemia. Patients with other coronary risk factors (i.e., smoking, hypertension, obesity, and lack of exercise) should be encouraged to modify their behaviour, in conjunction with adopting the modified lipid diet.

If dietary intervention is inadequate, a fibrate to lower blood cholesterol levels should be considered. The dual benefit of triglyceride lowering and HDL elevation is achieved with this therapy. However, fibrates can lead to deterioration in the glomerular filtration rate (GFR). Regular monitoring of the serum creatinine, at least 3-monthly, during the fibrate therapy should be undertaken. The fibrate should be ceased if any persisting unexpected rise in the serum creatinine of more than 20% occurs. Consideration of further investigation before reintroduction of the fibrate should be given if the creatinine does not improve within 3 months of the patient being off the fibrate medication. The reduction in the GFR is usually reversible when this policy is practiced.

Definitions:

Levels of Evidence

Level I: Evidence obtained from a systematic review of all relevant randomized controlled trials (RCTs)

Level II: Evidence obtained from at least one properly designed RCT

Level III: Evidence obtained from well-designed pseudo-randomized controlled trials (alternate allocation or some other method); comparative studies with concurrent controls and allocation not randomized, cohort studies, case-control studies, interrupted time series with a control group; comparative studies with historical control, two or more single arm studies, interrupted time series without a parallel control group

Level IV: Evidence obtained from case series, either post-test or pretest/post-test

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

- Dietary modification under the supervision of a suitably qualified dietician may be helpful for managing the hypertriglyceridaemia.
- Implementation of local guidelines for the non-renal failure population may benefit the vascular health of the pre-dialysis renal patient.
- The dual benefit of triglyceride lowering and high density lipoprotein(HDL) elevation is achieved with fibrate therapy.

POTENTIAL HARMS

Fibrates can lead to deterioration in the glomerular filtration rate (GFR).

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2005 Dec

GUIDELINE DEVELOPER(S)

Caring for Australasians with Renal Impairment - Disease Specific Society

SOURCE(S) OF FUNDING

Industry-sponsored funding administered through Kidney Health Australia

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Author: David Voss

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

All guideline writers are required to fill out a declaration of conflict of interest.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Caring for Australasians with Renal Impairment Web site.

Print copies: Available from Caring for Australasians with Renal Impairment, Locked Bag 4001, Centre for Kidney Research, Westmead NSW, Australia 2145

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- The CARI guidelines. A guide for writers. Caring for Australasians with Renal Impairment. 2006 May. 6 p.

Electronic copies: Available from the Caring for Australasians with Renal Impairment (CARI) Web site.

PATIENT RESOURCES

None available

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